The Soybean Digest

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OF

THE AMERICAN SOYBEAN ASSOCIATION

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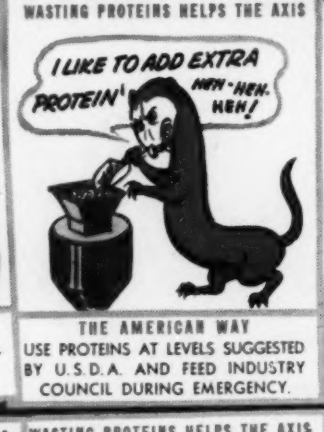
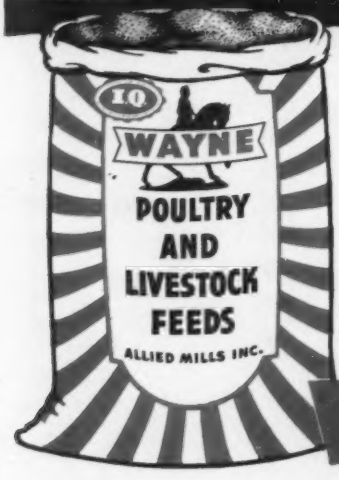
DECLARE WAR ON THESE WEASELS.*.





Join the army of American Farmers in the battle against waste of vital protein feeds. These thieves have no place in your war-time feeding program. The conservation and stretching of available proteins is necessary in order to do a good job under present conditions. Enlist with your Wayne Feed dealer in this campaign . . . he will be glad to lend a helping hand. *Your reward will be extra production for Uncle Sam . . . extra profits to invest in War Bonds for yourself.*

IN PEACE OR WAR--IT PAYS TO FEED

WAYNE ALLIED MILLS, INC. EXECUTIVE OFFICES • CHICAGO SERVICE DEPT. • FORT WAYNE

THE *Soybean Digest*

GEO. M. STRAYER, Editor KENT PELLETT, Managing Editor

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Vol. 3 JUNE 1943 No. 8

IN THIS ISSUE

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WE ARE CORRECTED

WE stand corrected. . . . . Last month, in discussing the revision of grading standards on CCC beans last Fall, we made the statement that "To date, we have not heard of a single grower who has received such an adjustment" — referring to the additional payment to be made to growers who had sold their beans before the discounts on frost and immature damage were changed.

Several Iowa processors, where the damage was worst, have called us to task — and rightfully. Several of them immediately after the revision by CCC made restitution to all sellers of beans with whom they did business. Most of them took steps to see that the remittance reached the grower of beans, in those cases where sales were made through dealers. Our apologies to those of you who jumped at the chance to treat your growers fairly!! And also our commendations!!

And our original criticism still stands. There are some adjustments not yet made. Since the Commodity Credit Corporation in actuality purchased all 1942 crop soybeans, they should have made provision for distribution of equitable payment to all growers.

THE MAN WHO COMPLIED WITH COMMODITY CREDIT REQUESTS AND MARKETED HIS BEANS EARLY SHOULD NOT BE PENALIZED. We suggest that steps be taken immediately to see that adjustments are made to *every* grower. And that in the future any such orders issued by CCC be made retroactive. Unless such steps are taken some of the very vehement criticisms of the governmental program will be continued. And there are going to be some soybean processors side-tracked when future crops are marketed!

UNFAIR DISCRIMINATION

OUR attention is called to the fact that a California Dairy Bureau ruling requires that all soybean milk sold in that state must be labeled "imitation milk."

Such a labeling not only discriminates against a wholesome product widely endorsed by the medical profession, but is also downright misleading. Soybean milk is in no sense an imitation of nor a substitute for cow's milk or any other milk, but a product sold on its own merit. Neither advertising, labeling nor analysis suggests in any way that it is a substitute for cow's milk. Many people who are allergic to cow's milk find that they are able to digest readily a vegetable product, and it is to this specialized trade that most soy milk manufacturers cater.

Webster's dictionary recognizes vegetable as well as animal milks, but not the California Dairy Bureau! Coconut milk and almond milk are common terms. It would be just as reasonable to require all cow's milk to be labeled "imitation."

California manufacturers of the soy product must pay a $100 license fee, wholesale distributors $50, and retailers $5 each. With the relatively small volume sold, such taxes are prohibitory in many instances, and certainly result in materially higher selling prices.

It is to be hoped that efforts now under way to remove such restrictions in that state will be successful.

INFORMATION — PLEASE

EVEN in war times a product is worth only its comparative value in relation to other similar or substitute materials. Soybean oil made from green (frozen) soybeans carries a green color — apparently chlorophyl color — which carries over in the extraction. Removal of that coloring matter from the oil involves costs which run above the refining costs on bland or yellow oils.

For several months we have been endeavoring to obtain accurate information on the value of the oil extracted from 1942 crop beans showing frost damage. In the May issue we stated that "no statement that the quality is actually harmed by frost has come to our attention." We have repeatedly asked soybean processors, soybean oil refiners and others for definite information on frost damaged oil. None has been furnished. Only opinions have been offered.

Laboratory information coming to us from colleges indicates some damage. We still do not know how much. When definite figures are available we will then know the extent of justice or injustice of present grading standards. We do know that revisions are in order, and that the men in charge of the Federal Grading standards and the CCC soybean purchase program can do no greater service to the growers of the nation than to establish a sound basis for soybean purchases before the 1943 crop begins to reach the markets.

Farmers can't go wrong in planting soybeans as an emergency hay crop in low places where early seedings have been drowned out. Soys are approximately equal to alfalfa in yield and protein content, and will add to next winter's protein stockpile, which is going to be none too large on the average farm. Plantings up to July 1 should mature for hay.

Do You Process Soybeans?

HERE'S EQUIPMENT YOU'LL NEED

Successful processing of soybeans requires careful grading. Equipment shown here is necessary for profit-making short-cuts. Order from Seedburo now while stocks are still available.

STEINLITE MOISTURE TESTER

the STEINLITE one-minute moisture tester

ACCURATE — EASY TO USE

Know what you buy . . . test your beans for moisture. Know your meal meets moisture standards. The Steinlite tests either whole or processed beans for moisture accurately. The fastest, simplest moisture tester built. Every machine checked against Government standards. Easy to operate as a radio. Upkeep is negligible. The lowest cost moisture testing method we know about. Compact, small, portable. Over 3000 users . . . widely used by soybean processors.

110 V, 60 cycle AC, f.o.b. Atchison, Kans.... **$275.00**

You will know the true value of the beans you buy if you take several samples from car or truck lots with this 11-section, 63″ Grain Probe; mix the samples with the efficient Boerner Modified Multiple Divider; cull and grade beans with the Soybean Dockage Sieves; and test for moisture with the Steinlite. Only with the aid of this equipment can you be sure you get what you pay for when you buy beans. Seedburo has been "Headquarters" for this equipment since 1912. State and Federal Grain Inspection offices, and cotton and soybean oil mills are prominent amongst Seedburo's thousands of users.

BOERNER MULTIPLE DIVIDER

SOYBEAN DOCKAGE SIEVES

GRAIN PROBES . . . 63″ Government Special; double brass tube; extra heavy bronze points ..... **$17.00 each**

BOERNER MODIFIED MULTIPLE DIVIDER . . . A durable, thorough, 4-section mixer built to withstand wear and abrasion. Openings for 16 streams of grain in each of 3 bottom sections ..... **Complete $52.50**

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Commercial Type **$6.75**

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"HEADQUARTERS" for broad line of official grain grading equipment since 1912

SEEDBURO EQUIPMENT COMPANY

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SOYBEAN OIL IN Shortening

Soy threatens supremacy of cottonseed oil in this important industry.

READERS of *The Soybean Digest* know of course that shortening is one of the major food products of the country. The U. S. Department of Commerce tells us that among the food industries shortening now ranks eighth in dollars and cents value. About a billion and a half pounds of this product are manufactured each year in 65 plants, which are widely scattered over the country.

During recent years the amount of shortening made in the United States has just about equaled the annual production of lard and also of creamery butter. But the present limited supply of vegetable oils and our greatly increased hog production are giving us now an output of lard that is considerably above shortening.

Ingredients

The shortening we are telling you about is made primarily of refined vegetable oils. In some shortenings only one oil is used. In others two or more vegetable oils are blended. This shortening is made in two ways: (a) All the oils may be made plastic by the introduction of certain amounts of hydrogen — a process called hydrogenation. Or (b) a portion of the oil may be hydrogenated and then mixed or creamed with oil that has not been hydrogenated. Hydrogenation brings the oils to the desired degree of hardening. Large quantities of shortening are also made by mixing vegetable oils with animal fats, principally edible tallow and edible stearin. Of the total of all oils and fats used in shortening over a period of 10 years, 91 per cent was vegetable oils, and 9 per cent animal fats.

What part of this 91 per cent is soybean oil? *Digest* readers will be interested in knowing what the great shortening industry now means to them as a market outlet for their "Gold from the Soil." To present the exact picture we turn to figures collected and published by the U. S. Bureau of Census.

Until recently comparatively small amounts of soybean oil found a market in the shortening industry. The research laboratories had been busy for a number of years with their refining experiments, but manufacturers did not begin to buy or use this new oil freely until about eight years ago. Soybean oil represented only one-fifth of one per cent of all the oils and fats used in the shortening made in 1934. Nor was much of it then used in salad oils or other edible products. Most of it went into paints and to other such industrial users, and at lower than the edible oil price levels.

More in 1935

We come to 1935. You will remember that was a Midwest drouth year resulting in a greatly decreased hog crop and consequently less lard, but more shortening. Of the increased quantities of vegetable oils the shortening manufacturers used in 1935, 52,452,000 pounds were soybean oil. However this represented only 3.4 per cent of the total of all oils and fats used in shortening that year. The largest shortening ingredient then as it has been from the beginning was cottonseed oil, averaging over the years about 70 per cent.

Continuing with our census figures we find that 113,897,000 pounds of soybean oil were used in shortening in 1936 and by 1939 the amount had been stepped up to a little over 200,000,000 pounds, about 15 per cent of all ingredients.

25 Percent in 1943

The 1942 census report, showing the factory consumption of fats and oils in shortening and in other products, reveals that 335,555,000 pounds of refined soybean oil were used last year in shortening. This was 26.5 per cent of all the vegetable oils and animal fats so used.

So at long last we find the leadership of the Southern cottonseed oil ingredient in shortening being seriously challenged by this formidable new rival from the Midwest. Soybean oil is on the march. It is quite possible that before this war is over it will move into first place among shortening's various oils and fats ingredients.

Digest readers will be glad to know that refined soybean oil is also now the second most important fats and oils ingredient in margarine. 133,346,000 pounds were so used last year. And 60,857,000 pounds went into salad oil and other edible products.

In 1942 the different food industries consumed 529,758,000 pounds of refined soybean oil, or 87.7 per cent of total "factory consumption" of this oil. Only 74,166,000, or 12.3 per cent went into industrial or non-food products. And remember that the food industries pay a slightly higher price for vegetable oils than do the industrial users.

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KISHLAR HEADS OIL CHEMISTS

At the annual meeting of The American Oil Chemists' Society meeting in New Orleans, Lamar Kishlar, St. Louis, was elected President for the coming year. Dr. Kishlar is Manager of Research for the Ralston Purina Company. He has been identified with research on soybean products since the pioneer days of the soybean's American development. He has been interested in the nutritional values of cottonseed and in its processing. Dr. Kishlar is a Fellow of The American Society of Agricultural Engineers, a Councilor for The Institute of Food Technologists, and Chairman of the Soybean Nutritional Research Council.

The Good Average Yield

• THAT'S WHAT COUNTS

By J. E. JOHNSON

• *Joe Johnson of Champaign, Ill., is vice-president of the American Soybean Association. He manages 65 farms in the heart of the soybean belt, grows soys on most of them. He says we have been paying too much attention to championship yields.*

IN my humble opinion, too much stress is being placed on the probable high yields of soybeans as a crop — by far too little on the average yield: that level where the high percentage of growers land when the final actual yields are given for thousands of fields.

True, we have some high yields, for example the picture is a cross section of a mile of soybeans in Champaign County; 170 acres in this field (1942) that averaged 34.1 bushels sold. This same grower had an average of 35.7 bushels per acre on 158.3 acres, sold in 1941. Can we take this as a criterian for soybean production? Definitely no. This is one of 65 farms where soybeans constitute the major crop and on no other farm or farms of the 65, do we find the high consistent performance above reported. Yes, this is good land, however, has never been limed or phosphated and only one crop of sweet clover plowed under green on 60 acres of this 170 acre field.

Yield Contests

Take for example the results of the Illinois Ten Acre Soybean Yield Contest, a part of an effort for greater efficiency in soybean production. In 1941 with twelve growers completing the contest: average yield 35.498 bushels per acre (high 50.73, low 20.26), quality 77.4%, production cost for the ten acres $214.84, oil content on dry basis, 21.287%. In 1942 with eleven contestants, average yield 39.695 bushels per acre (high 52.91, low 26.97), quality 79%, production cost for the ten acres $234.07, oil content, dry basis 21.925%.

While only a small number of growers completed the contest each year, they do represent a wide distribution, 9 counties in 1941 and 12 in 1942. Obviously it presents the highest effort in production as evidenced by the one outstanding yield each year. It is interesting to note that only three contestants made 40 bushels or more in 1941 and five in 1942. The increase in the oil content in 1942 is gratifying, due to a wider use of high oil content varieties of soybeans.

With the heavy rainfall retarding work it is to be expected that the large soybean producing states will have a much later planting than anticipated. These five problems present themselves for the 1943 production, namely: (1) processing capacity, (2) the use of adapted varieties, (3) harvesting and storage, (4) grading standards, and (5) the seed situation.

The processing capacity is in a class to itself. The seed situation need not be serious, provided farmers took the precaution that should characterize the work of any careful producer. There is much to be said about varieties as to adaptation to localities, soil types and general use. This has been very much overlooked and the year 1942 proved how costly it is for growers to disregard the advice given about varieties, such as planting a full season variety in a short or medium maturing section, also the adaptation as to soil fertility and the crop sequence for the respective farm. It is probable that the storage factor will be solved with an increase in storage at local elevators and other points. The year 1942 was hard on the combines. Thus far there is some assurance of new combines, but mostly of the small size.

Row vs. Solid

For several years there has been discussion as to whether rowing or solid drilling made the highest yield. Obviously this is not the question of vital importance. Consistent good to high average yields over the period is however, of very vital importance. The grower who rows consistently has the assurance of not having those years when weeds, farm enemy number one, take a heavy toll. The past year this enemy reduced the yields of many fields from 10 to 15 bushels per acre. The question is — how will this grower overcome this loss, if he prefers to use methods that are associated with hazards that come too frequently?

The highest yields produced in the Ten Acre Growing Contest were rowed soybeans. The matter of the proper distance for rowing remains a question. Experienced growers and observers would perhaps contend that for mechanical farming the 28-inch row would be the most satisfactory. On farms where the distance varied from 21 to 40 inches, the yield varied little, provided the matter of *varieties* and *population* had been given the attention they deserve.

There is evidence that we haven't given enough attention to the technique of growing soybeans efficiently. When the records show there is a 100 percent spread in the labor of producing beans, it is high time that we give more attention to the technique of growing a crop of so much importance and constantly growing in economic importance.

Thanks to *The Soybean Digest* in promoting the matter of inoculation as an aid to more efficient production. This calls to mind that with the humus inoculation, termed "dust" by many growers, the thoroughness of inoculation is overlooked. In looking for the "easy" way this good material is sprinkled in the drill box with the seed or in the containers used in handling the beans. The instructions definitely specify that each bean be coated with the "dust," otherwise the value is largely lost.

The whole matter of greater efficiency in soybean production can be summed up in two words, *PULLING TOGETHER.* Yes, a coordinated effort on the part of the grower, the grain trade, processors, scientists and any person or agency that can make a contribution. American initiative and ingenuity have done much. We have only scratched the surface in our agricultural possibility and resources.

J. E. Johnson stands in the center of a mile long field of soybeans, his special pride.

JAPS EAT RICE AND BEAN CURD

The Japanese soldier in the field eats a highly nutritious, scientifically balanced diet particularly well adapted to his special needs and considerably better than the customary diet of the Japanese civilian, according to studies of captured Japanese army rations made at the Board of Economic Warfare. Food items tested include the standard ration biscuit, a health drink called "Mirin" containing lactic acid, a yeast preparation called "Florylin," wheat germ tablets, and a tinned ration labeled "rice and soybean curd."

Rice and bean curd is a mixture of cooked rice and soybean protein flavored with shoyu sauce. Soybeans ground in water yield soluble proteins which form a solution known as "soybean milk." When boiled this forms a surface skin due to the coagulation of proteins, and the skin when totally or partially dried is highly nutritious, containing valuable proteins which are considered a satisfactory substitute for fish or meat.

The rice and bean curd ration used by the Japanese thus offers an excellent combination of carbohydrate and protein. It is, in fact, a sort of cooked sandwich, in which boiled rice takes the place of bread and the soybean protein takes the place of meat.

Will Meet Soybean Acreage Goals

--- In Spite of Late Spring, Wet Weather, Machinery and Labor Troubles

● *The 1943 soybean acreage goals will be met or exceeded. This despite a delay in planting of from one to three weeks due to cold weather and excessive moisture in much of the corn belt, Digest correspondents report, as of June 1. Predictions are that some corn and cotton acreage will be shifted to beans. A trend toward earlier varieties is reported, influenced both by the September 1943 freezes and the late planting which decreases likelihood of late varieties maturing.*

In some sections a somewhat larger percentage of beans will be planted for hay. However, further south the tendency is to plant more beans for beans.

Illinois

Russell S. Davis, Clayton, for west central: Planting 3 weeks late, 3 solid weeks rain in May. Seedbeds cloddy and weedy. 25 percent planted, more for hay than 1942. Most farmers satisfied with price. A shift toward different varieties, as anything new has followers.

J. E. Johnson, Champaign: Latest planting of corn since 1917. Soybeans will come through while the seed corn outlook isn't too encouraging.

Iowa

Leo M. Hobbins, for West Pottawattamie County: Planting 10 days late. 30 to 40 percent planted. Some 600 acres intended for beans will not be planted due to Missouri River overflow. Crop goals will be met. Most black and brown beans grown in 1942 shifted to CCC mixed yellow varieties. Farmers satisfied with CCC purchase program.

Howard L. Roach, Plainfield, for northeast: Planting 10 days late, 25 percent planted. Unseasonably cold, frequent rains hinder planting. Goals will be met. Trend toward earlier varieties. Richland popular. 15 percent for hay.

John Sand, Marcus, for Cherokee County: 95 percent planted, with beans coming up in nice shape. Goals met. Richland variety in great demand. Practically none planted for hay.

Ohio

Professors R. D. Lewis and D. F. Beard, Ohio State University: Planting 2 weeks late, with 5 percent planted. Twice normal May rainfall in several principal soybean areas. Over acreage goals. Some corn acreage may be planted with soys because of late season. Shift toward standard recommended varieties — Richland and Mingo, with Illini, Dunfield and Scioto. Percentage to hay probably greater than in 1942, possibly 25 as compared with 11.

W. G. Weigle, Van Wert, for northwest: 3-4 weeks late, 5-10 percent planted. May rainfall 10 to 13 inches. Crop will not get in ground in nearly so good shape as in past seasons. Will undoubtedly increase acreage. Shift toward earlier varieties. Seed supply limiting factor.

Elmer F. Kruse, State AAA, Columbus: No planting completed. Current moisture supply excessive. Intended acreage 5 percent above crop goal. A shift toward earlier varieties, with increased hay acreage. Increased planting of beans quite likely at expense of corn. Producers demanding larger part of meal, otherwise grinding of whole beans for feeding purposes will increase.

> *Farmers are not at all discouraged. Planting will proceed with lightning speed. — J. B. Edmondson after a month of May rains and no beans planted.*

G. G. McIlroy, Irwin, for central to west central: Continued wet weather delayed all planting. 5 percent planted June 1. Partially due to delayed plantings, more early beans sown, especially Richlands. Very small percentage for hay.

Indiana

K. E. Beeson, extension agronomist, Purdue University: Floods just subsiding, perhaps 1 percent planted. We can make no guess on what farmers will do under this emergency for they don't know what weather, also labor and machinery uncertainties, will permit. Richland extensively used.

Ersel Walley, Fort Wayne, for northwest Ohio and northeast Indiana: Crop situation very unfavorable. Excessive and continued rains have left soil in bad condition to prepare seedbed. Less than 5 percent planted. Will likely attain 1943 goals. More Richland and other earlier varieties. Elevators feel government marketing program unfair and unwise.

J. B. Edmondson, Clayton, for south central: Bean ground practically all plowed but packed hard by month's heavy rains. No beans planted yet. Late season has increased soybean intentions. Demand for Richland indicates decided trend toward earlier varieties. Hear very little complaint among farmers toward CCC program.

Peter J. Lux, State AAA, Indianapolis: Decided shift from corn to soybeans because of inability to plant corn in time. Acreage 25 percent above 1943 goals. Prevailing attitude toward CCC program very good.

Wisconsin

Walter F. Katterhenry, State AAA, Madison: Planting delayed by late spring and unusual amount of rainfall. 50 percent planted. If heavy rainfall continues likely additional beans planted for hay. Government program has assisted in moving beans from isolated areas. Otherwise would have remained unmarketed or sold at sacrifice.

Geo. M. Briggs, extension agronomist, Madison: 65 to 90 percent planted. Planting conditions too wet, with labor shortage some farmers planting solid. Where early seed scarce row plantings predominate. Acreage may be smaller than 1942. Due to early soybeans being scarce, quite a little late seed brought in through AAA. Price of soybeans not commensurate with corn, therefore with additional risk of soybeans, acreage not as great as earlier anticipated. Some farmers believe price should be 2½ times corn, otherwise more corn and less soybeans will be raised. In light of 1942-43 marketings of oil from frozen soybeans, grades must be readjusted if acreage to continue.

Michigan

Samuel T. Busey, Deerfield, for southeast: No planting, very late. Farmers not able to get into fields for 5 weeks. Old settlers say have never known such a wet spring. Many to shift to Canadian Mandarin. Considerable percentage planted for hay. Prevailing attitude toward government's marketing program rotten. Good farmer takes care of himself.

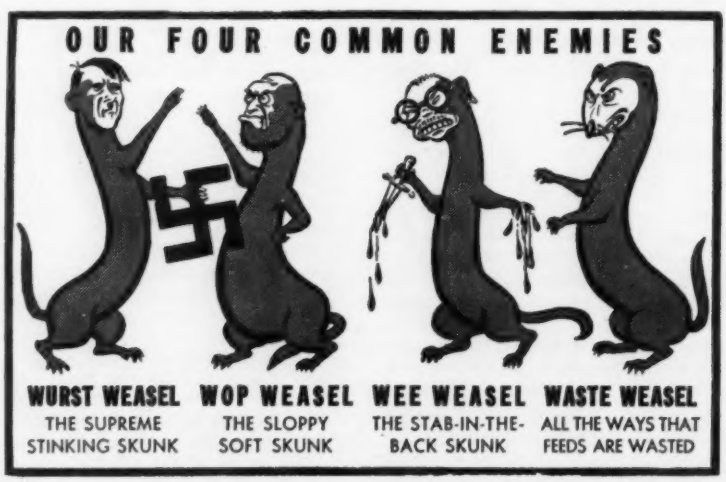
> *Man for Man and Acre for Acre, we must produce as never before. — J. E. Johnson.*

A. A. Johnson, Sec. Michigan Crop Improvement Assn., East Lansing: Planting conditions very wet and late, with 5 to 10 percent planted. Intentions to plant 80 percent of 1942, but with intermittent rains after wettest May on record impossible to foresee what acreage will be. Shift toward earlier varieties insofar as existing seed supplies permit.

Missouri

H. Baxter Hall, State AAA, Columbia: Land very wet, no beans planted. Estimated 650,000 acres to be planted, compared with 550,000 acre goal. 5 to 10 percent for hay.

(Continued on page 13)



Allied Mills have declared war on food saboteurs! Note that the Waste Weasel takes equal rank with the other stinkers pictured above.

You'll be meeting these enemies this summer in Wayne magazine advertising, on store posters, in a Wayne 15-minute air show, "Victory Farmers," over major stations, and at the Wayne display at the I.B.C.A. convention in Chicago July 20-22.

A slide film entitled, "Came Weasels Bye," is available for loan to feed dealers, hatcherymen, Feed Industry Council organizations and county agents interested in spreading the story of feed conservation. Devoid of advertising material and strictly educational in nature, the film may be obtained by writing to Allied Mills, Inc., Fort Wayne, Ind.

★ RESEARCH ★

PIG FEEDING EXPERIMENT

An experiment to secure data on feeding values for pigs of expeller soybean oilmeals made by various procedures and of toasted extracted soybean oilmeal, was recently concluded by W. L. Robison, in charge of swine investigations at the Ohio Experiment Station.

Both meals made by the super duo expeller, which was oil cooled, produced more rapid and more efficient gains than those made by the duo expeller without oil cooling, states Professor Robison.

For the last half of the experiment the pigs fed toasted extracted soybean oilmeal required as much or more feed per unit of gain as any of those fed expeller meal except one lot. They outdid the others to such an extent during the first half, however, that for the entire time their daily gain and gain per unit of feed consumed surpassed those of any of the four groups fed expeller soybean oilmeal.

Experiments with levels of fat ranging from 2.6 to 8.7 per cent showed fat to have a relatively high value for pigs. Much over 4 per cent of softening fats is likely to produce soft pork. Extracted soybean oilmeal has the advantage of a high protein content but the disadvantage, which probably is not serious in common rations, of a low fat content. In this experiment, as previously mentioned, the fat contents of the different rations were equalized.

Unless a deficiency in the ration, which obviously existed, beclouded the results in the last half but not the first half of the experiment, the data provided no evidence of danger of overheating expeller soybean oilmeal, under practical operating conditions, so far as its worth for pigs was concerned, and then only when oil cooling was employed. If the data for the first half but not the last half were typical, the meal made with the super duo expeller from flaked beans subjected to a lower temperature in the drier had higher feeding value for pigs than that made with the super duo expeller from coarsely ground beans that were heated to a higher temperature in the drier.

The experiment was made possible through the cooperation of the Anderson Expeller Company, the Central Soya Company, and the Berea Milling Company.

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BEANS LEAD IN TOTAL PROTEIN

Soybeans have consistently led all other Minnesota farm crops in the per acre production of digestible protein over a 21 year period during which experiment station tests have been conducted.

This result is reported in Minnesota Bulletin 365, "Comparative Values of Crops," by H. K. Hayes. Soybeans led the list of crops grown in total protein production at all five stations at which they were grown. They varied from 208 pounds of protein per acre at the Grand Rapids station to 388 at the Waseca station. Other crops grown were three varieties of wheat, oats, barley, rye, flax and corn.

Soybeans gave average yields in bushels per acre of 17.2 bushels at University Farm, 22.9 bushels at Waseca, 16.3 bushels at Morris, 15.6 bushels at Crookston, and 10.8 bushels at Grand Rapids. They are of considerable interest for feed because of their high yields of digestible protein. Calculated digestible protein in pounds produced per acre from 1921 to 1941 was 333 pounds at University Farm, 388 at Waseca, 337 at Morris, 266 at Crookston, and 203 at Grand Rapids.

On the basis of cash value per acre from 1921 to 1941, corn and soybeans compared as follows: University Farm—corn $23.59, soybeans $21.63; Waseca—corn $34.29, soybeans $25.22; Morris—corn $24.70, soybeans $21.89; Crookston—corn $17.97, soybeans $17.28; Grand Rapids—corn $16.75, soybeans $14.34.

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STUDY AT MISSISSIPPI

A study of the relationship of the increase in yield to protein content brought about by inoculation of soybeans and vetch at the Mississippi Agricultural Experiment Station is presented by W. B. Andrews, associate agronomist, and Chas. F. Briscoe, bacteriologist, in the April 1943 issue of the *Journal of the American Society of Agronomy*.

Different strains of bacteria, the efficiency of which varied widely, were used. Results found indicate that there is a good correlation between the increase in yield and the increase in nitrogen content of soybeans receiving different strains of nodule bacteria on unlimed soil. On the other hand there was no correlation between the increase in yield and nitrogen content of soybeans receiving strains of nodule bacteria on limed soil.

The conclusion reached by the authors is that increased yield due to inoculation of soybeans and vetch is a single factor which describes the efficiency of soybean and vetch root bacteria, and that nitrogen determinations are not necessary.

A Missouri Yield Contest

MISSOURI soybean growers will have an opportunity to compete in county and statewide yield contests this year, similar to those being conducted in Iowa, Illinois and Indiana.

These are five-acre contests, with recognition to state and county champions, and are sponsored by the agricultural extension service of the Missouri College of Agriculture and the Alton Railroad. Cooperating farmers may enter with a minimum of five acres in one tract of approved yellow-seeded soybeans. The yield will be determined by combine or binder-thresher harvesting.

The program will be conducted with two classes. Class A entrants will use a check strip one rod wide receiving no soil treatment, and harvested separately. Winners in this class will be those who produce the largest increase in yields over the check strips.

Awards in Class B will be based entirely on the yield of grade No. 2 yellow beans.

State and county champions will be named in both classes. The Alton Railroad will award $25.00 war bonds to all county champions in each class. The extension service of the College of Agriculture will award a certificate of recognition to the state champion in each class.

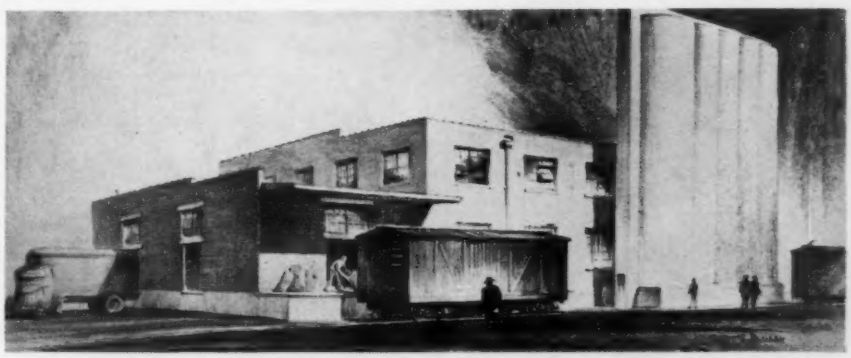
Entries can be made only in one class, and there must be a minimum of 20 entries per county. Cooperating farmers will make a simple report covering soil treatment, varieties and cultural practices. Yields will be certified by an approved county committee or two neighbors.

State champions and reserve champions will be selected from county champions by a committee consisting of a representative each from the Missouri Farmers Association, Missouri Farm Bureau Federation and Missouri Corn Growers Association.

—s b d—

A new $500,000 plant in Hamilton, Ontario, Canada, for the production of oils from flaxseed, soybeans and copra, is scheduled to go into operation July 1, with ultimate daily production of 225 tons, it is reported.

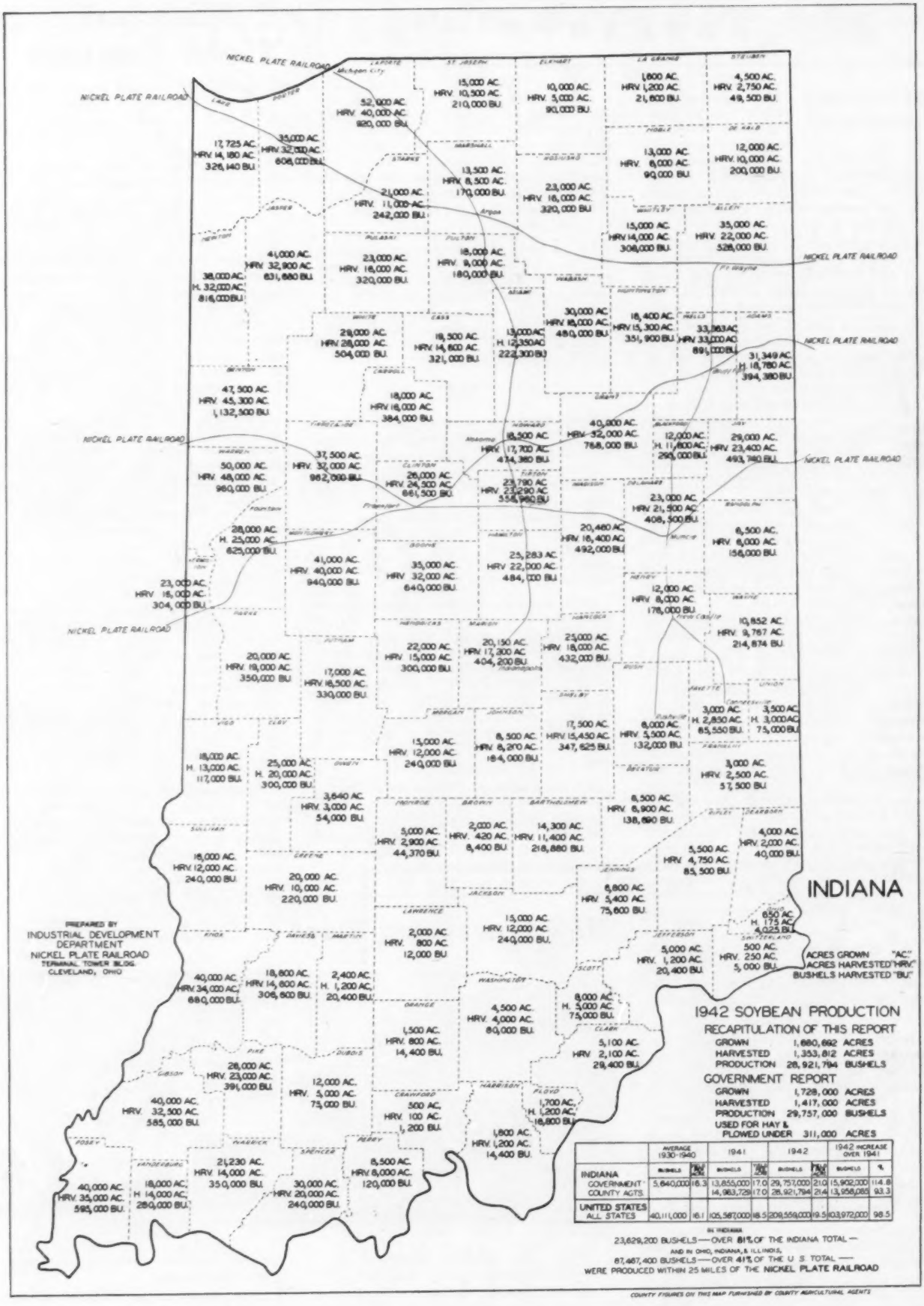
New Processing Plant in St. Louis



This is the artist's conception of the soybean crushing plant to be erected this summer by the Blanton Company, St. Louis.

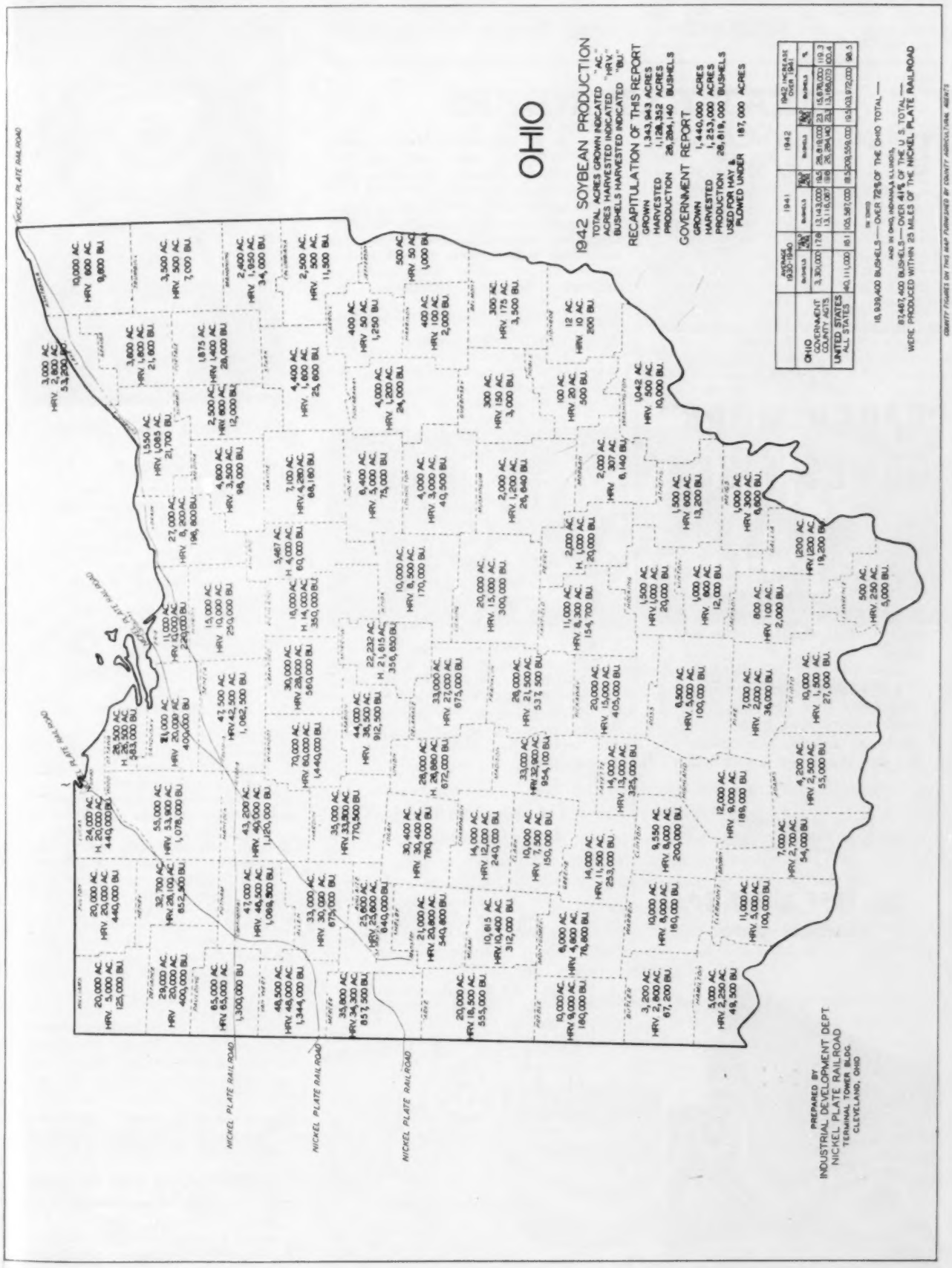
The bean mill will be operated in connection with Blanton's vegetable oil refinery and its plant manufacturing vegetable oil food products such as salad oil, margarine, vegetable shortening, mayonnaise and salad dressing.

The plant has been designed to crush 6,000 bushels of beans per day, but due to shortages of critical materials the initial output will be 3,000 bushels. Materials will be brick and concrete with no lumber whatever.



	AVERAGE 1930-1940		1941		1942		1942 INCREASE OVER 1941	
	BUSHELS	BU. PER AC.	BUSHELS	BU. PER AC.	BUSHELS	BU. PER AC.	BUSHELS	%
INDIANA								
GOVERNMENT	5,640,000	16.3	13,855,000	17.0	29,757,000	21.0	15,902,000	114.8
COUNTY AGTS.			14,983,729	17.0	28,921,794	21.4	13,958,065	93.3
UNITED STATES ALL STATES	40,111,000	16.1	105,587,000	18.5	209,559,000	19.5	103,972,000	98.5

THIS INDIANA soybean map is made available to our readers by the Nickel Plate Railroad. Indiana, ranking third in the nation in soybean production, increased acreage from 141,000 grown for beans in 1932 to 1.4 million acres in 1942.



OHIO SOYBEAN map, furnished through the courtesy of the Nickel Plate Railroad. Fourth in the nation in bean production, Ohio grew only 34,000 acres in 1932, but 1.25 million in 1942.

MEAT EXTENDERS

THE following tasty recipes that will help stretch the red ration points further are from Christine Ryman Pensinger, chief home economist of the state of Illinois.

Mrs. Pensinger has been one of the pioneers with soybean foods in the Illinois state institutions, where for a number of years she has worked on recipes which would stretch the meat allowance and thus reduce meal costs without lowering nutritional value. So the institutional kitchens under her direction were better prepared than most when meat rationing came along. We can hazard a guess that they have had little trouble living within their points.

These recipes were prepared by Mrs. Pensinger for the housewife, except for the last one, which is included to give our readers an idea of the scale on which meals are prepared at the Illinois institutions.

Hamburger and Spaghetti Casserole

1½ cups spaghetti, cooked
2 onions, small
¼ lb. American Cheese
1 tbsp. (scant) salt
¼ lb. soybean grits
½ lb. ground beef
1½ cups tomato puree
1 tbsp. butter
1 tsp. pepper
½ cup milk

1. Steam soybean grits for 1 hour before using.
2. Saute onions in the butter until tender.
3. Melt cheese in the milk.
4. Mix the steamed soybean grits in the ground meat, making a smooth mixture by adding 1 cup of the tomato juice.
5. Fill a casserole in alternate layers with the soybean-meat mixture, spaghetti, and onions, pouring part of the melted cheese over each. Either two or three layers can be made with this amount.
6. Pour the remaining ½ cup tomato juice over the last addition of cheese.
7. Bake ½ hour in a hot oven.

8 servings.

Creamed Hamburg

¾ lb. ground beef
1 cup water
2 tbsp. flour
1 tbsp. (scant) salt
¼ lb. soybean grits
1 medium onion
2 tsp. butter
1½ cups milk
½ tsp. pepper

1. Mix beef and steamed soybeans well.
2. Add finely cut onion, salt, pepper, and water.
3. Place in frying pan and cook until water has boiled away and meat is lightly browned.
4. Add butter and brown.
5. Sprinkle flour over meat and add milk.
6. Stir until smooth and thoroughly cooked through.

8 servings.

Victory Sausage

1 lb. country pork sausage
¼ tsp. salt
¼ lb. soybean grits

1. Mix sausage and steamed soybeans well.
2. Add salt and make into individual patties, weighing four ounces each.
3. Cook slowly in a slightly greased skillet with cover. May also be baked in a covered pan.

4 servings.

CHRISTINE RYMAN PENSINGER

Tomalie Pie

(Amount for 150 gallons)
47¼ lbs. soybean grits
11¼ gallons cold water
16½ lbs. shortening
50 lbs. onions, chopped
166 lbs. beef, ground
29 gals. (33 cans) evaporated milk
66 gallons water
56 lbs. rolled oats or whole wheat cereal
1½ lbs. sugar
13½ lbs. salt
2 cups pepper
24¾ gals. (33 cans) tomatoes

Procedure:

1. Combine soybean grits with cold water.
2. Place grits in steamer and steam 1 hour at 5 pounds pressure.
3. Melt shortening and brown onions in it.
4. Add meat and cook until the red color disappears.
5. Add water and milk, bring to boiling temperature, and add cereal slowly, so that mixture does not stop boiling.
6. Add seasoning and cook rapidly for 5 minutes, stirring constantly.
7. Reduce temperature and cook very slowly 40 minutes, stirring occasionally.
8. Turn off heat.
9. Add tomatoes, heat thoroughly, but *do not boil.*

—s b d—

One bushel of soybeans produces approximately one gallon of oil and 48 pounds of meal.

★ BOOKS ★

GEORGE WASHINGTON CARVER, AN AMERICAN BIOGRAPHY, by Rackham Holt, published by Doubleday Doran & Company. 342 pages. Price $3.50.

A good biography of this pioneer in peanuts, sister crop to soybeans. The work of the famed negro agricultural leader of Tuskegee Institute was essentially that of the pioneer. Before the turn of the century he was preaching that the south should balance its agriculture by growing peanuts and sweet potatoes. The story of how he originated 300 uses for the peanut in order to provide a market for that crop has often been told.

The fact that he was also interested in soybeans and had lectured on the soybean derivatives he had found — flour, meal, coffee, breakfast food, oil, milk — long before the crop had been picked up by midwest growers, is not so well known. He advocated peanuts rather than soybeans in the rotation because most southern growers were familiar with the former.

Carver was apparently the first to note a fungus, a Cercospora, on the soybean plant, in 1901. It was not recorded again in the United States until 1924.

Carver has been called the first and greatest of the chemurgists. Says Holt, concerning his chemurgic philosophy: "He had a vision in which he saw that farms could be transformed into something more than mere food factories; they could become a source of the raw material of industry. This was an idea which was to capture the imagination of millions when it was advanced by white industrialists 30 years later."

REDIRECTING FARM POLICY, by Theodore W. Schultz, published by Macmillan Company. 75 pages. Price $1.00.

Dr. Schultz, who is professor of agricultural economics at Iowa State College, makes out a good case for scrapping the farm parity formula as well as AAA subsidies and acreage allotments. Parity prices, which he calls obsolete, prevent necessary adjustments to meet changing conditions. At present they are resulting in too much land in cotton and wheat, not enough in soybeans and feed crops.

On the positive side he proposes that the USDA control farm policy through production goals and forward prices, such as are now being used with soybeans. In the case of annual crops, these goals and prices would continue to be announced each year ahead of the planting season. For the AAA payments, the author would substitute further social benefits, of which school lunches have been an example, which would be available to all on equal terms.

PLAN FOR SOY UTILIZATION

A program contemplating greater utilization of soya products, domestically and for military and foreign rehabilitation purposes, was outlined at the initial meeting of the Soya Products Industry Advisory Committee held recently in Washington, D. C.

Under present plans, Donald S. Payne, Chief of the Soya Products Section of the Food Distribution Administration, told the committee, roughly one-third of the expected record 1,500,000,000-pound output of these products would be allocated for domestic use, leaving the remaining two-thirds for war uses.

The proposed domestic allocation will permit broader civilian use of soya products as a nutrition fortifier and as a supplement for foods which have become relatively scarce to civilians because of the war.

Representatives of the Lend-Lease Administration and of the Office of Foreign Relief and Rehabilitation said that demands for soya products for overseas feeding would continue to grow. Protein foods, feeds and oils, they pointed out, are especially scarce in the occupied countries, even in Norway, where fish supplies have been materially reduced because of insufficient fuel for fishing boats.

Roy F. Hendrickson, Director of the FDA, praised the soya industry for its cooperation in meeting expanded production goals and said that Committee recommendations would be of utmost value toward keeping Government programs on a workable basis.

Members of the committee attending the meeting were: A. E. Staley, Jr., A. E. Staley Manufacturing Co.; P. E. Sprague, The Glidden Company; R. G. Brierley, Archer-Daniels-Midland Co.; D. W. McMillan, Jr., Central Soya Company; Dr. Armand Burke, Soya Corporation of America; Dr. Harold Otto, Soya Products Company; W. L. Shellabarger, Shellabarger Grain Company; N. P. Noble, Swift & Company; John Dehaven, Allied Mills, Inc.

★ FEEDING ★

SHARE THE PROTEIN

With the country at war and the need to make the most of all our resources, American farmers are being called on to conserve the country's protein supply and to share it in such a way that it will produce the most food possible, states T. E. Woodward, Bureau of Dairy Industry, Agricultural Research Administration, U. S. Department of Agriculture.

The situation now is such that the farmer who feeds an excess of protein is depriving some other farmer of protein that he needs to do an acceptable job of feeding his livestock.

Many small dairy farmers and hog raisers never have fed enough protein to get the most profitable production from their animals.

Early this year the larger feed manufacturers adopted a voluntary program of limiting the protein content of mixed feeds to prevent wasteful use. For one thing, they have discontinued the preparation and sale of mixed feeds containing as much as 20 or 24 percent protein. Also, the Government has issued orders prohibiting handlers of high-protein feed to have more than a 15 days' supply on hand at any one time. Both these measures will help, but they will insure neither an adequate nor an available supply of high-protein feed for everyone who wants it.

The kind of roughage determines how much protein should be fed in the grain or concentrate mixture for dairy cows. If the roughage is alfalfa, soybean, or lespedeza hay, or silages made from these crops, or good pasture, the grain mixture should contain 12 percent protein; if the roughage is mixed legume and grass hays or silages made from these crops, or poor pasture, feed a 16-percent protein mixture; if the roughage is grass hay, or fodders or silages made from the corn, sorghum, or grass crops, feed 18-percent protein.

These recommendations are based on the assumption that the cows will eat 1⅓ pounds of hay a day for each 100 pounds of live weight and that other forage, especially silage, will be fed in the usual quantities.

The following grain and concentrate mixtures will provide either 12, 16, or 18 percent protein, for use in supplementing the various kinds of roughage:

12 Percent Protein

(1) Oats
(2) Barley
(3) Oats and barley, equal parts
(4) Corn, oats, and wheat bran, equal parts
(5) Corn, oats, barley, and wheat bran, equal parts
(6) Corn 70 parts, oats 20 parts, oil seed meal (soybean, linseed, etc.), 10 parts

16 Percent Protein

(1) Wheat bran
(2) Wheat bran and middlings (mill run)
(3) 50 corn, 30 oats, 20 soybean meal or cottonseed meal
(4) 40 corn, 25 oats, 20 bran, 15 soybean meal or cottonseed meal
(5) 50 corn, 35 bran, 15 soybean meal or cottonseed meal
(6) 50 barley, 30 oats, 20 linseed meal

18 Percent Protein

(1) 50 oats, 30 bran, 20 linseed meal
(2) 40 corn, 40 bran, 20 soybean meal or cottonseed meal
(3) 40 corn, 35 oats, 25 soybean meal or cottonseed meal
(4) 30 corn, 25 barley, 25 bran, 20 soybean meal or cottonseed meal.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue. Minimum insertion $1.00.

POSITION WANTED—A 37-year-old man with a broad background of experience and study is desirous of becoming connected with a reliable soybean processing company, as superintendent. All inquiries promptly answered. Address BB, Soybean Digest, Hudson, Iowa.

June Crop Report

(Continued from page 6)

J. Ross Fleetwood, extension specialist, Columbia: Cold wet weather delayed all plantings but ground still working well so beans going in in good shape. Wet season and poor stands in cotton section means increased acreage of soys there. Conditions following the floods in Missouri and Mississippi river lowlands elsewhere will govern plantings here.

Arkansas

Jacob Hartz, Stuttgart, for rice territory and east: Planting date earlier than normal. 75 percent completed. Considerable acreage of beans flooded in Arkansas and White River valleys. Will all be replanted plus additional acreage of corn land too late to replant. Will meet 1943 goals. Large increase in yellow varieties. 15 to 20 percent for hay. CCC pegged price cause of increased acreage. Growers favorable toward program.

Charles F. Simmons, extension agronomist, Little Rock: Believe soybean planting at least normal. Shortage of labor and machinery resulted in some delay. Government report on intention to plant 396,000 acres. Goal 400,000. Considerable increase in Ogden varieties, relatively new with us. Tendency to reduce relative acreage of Mamloxi for earlier maturing bean such as Arksoy and Arksoy selections. Soybean program worked out somewhat more successfully than any other government program, so prevailing attitude non-critical.

Kentucky

J. E. McClure, County Agent, Owensboro, for Daviess County: Have had some flood conditions, planting 3 weeks late, 20 to 25 percent completed. Sharp change from black to yellow varieties, U. S. 2 and U. S. 5 predominating. 10 percent for hay governed by amount of clover and alfalfa. Majority feel prices are set too low.

Louisiana

A. C. Smith, State AAA, University: 90 percent planted with moisture supply below normal. Estimated acreage 160,000 for beans compared with 130,000 goal. Some shift to yellow and green varieties from hay and soil building varieties. Estimate 25 percent 1943 planted acreage to be harvested for hay, compared with 51 in 1942 and 86 in 1941.

Alabama

O. W. Jones, State AAA, Auburn: 80 percent planted. Planting conditions good to ideal for entire state. Will meet goal 90 to 100 percent. Definite shift to Ogden variety, with 60 percent acreage for hay. Price should be higher to compare favorably with peanuts.

Maryland

Maryland Crop Reporting Service: Planting somewhat behind normal with 50 percent planted. Moisture far above normal. Goal will be reached. May be a few more yellow varieties than in past, with 45 to 50 percent for hay.

Virginia

State AAA, Blacksburg: Planting date week late due to wet and cool weather with 70 to 75 percent in ground. Acreage 170 percent of 115,000 acre goal for beans, with shift to early oil varieties. 10 percent for hay. Attitude toward CCC program generally good.

J. E. Ewing, agricultural statistician, Richmond: 69 percent planted with conditions good. March intentions 120 percent of 1942 acreage. Shift toward oil beans. 30 percent for hay 1942.

West Virginia

R. J. Friant, extension agronomist, Morgantown: 30 percent planted, delayed 2 to 3 weeks by cold, cloudy weather and wet soil. Will meet 1943 goal.

J. Ward Wood, State AAA, Morgantown: Planting irregular because of continued rains, with 50 percent completed. Shift from black to yellow varieties, with one-third planted for hay.

Connecticut

J. S. Owens, professor of agronomy, Storrs: Planting conditions wet, 10 days late. Acreage 25 percent above 1942 with 90 percent for hay. Some of best forage types short.

Nebraska

T. A. Kiesselbach, Lincoln, for east: 85 percent planted with favorable temperature and moisture since May 25. 12 percent above 1943 acreage goal. Dunfield and Illini in greatest favor tending to replace Manchu and Mukden. Assured price has encouraged some acreage increase, although more largely due to desire on part of farmers to assure selves of more adequate supply of portein, on basis of exchange of beans for meal.

G. T. Webster, assistant extension agronomist, Lincoln, for east: 90 percent planted with favorable conditions. Farmers have had difficulty in securing good seed. Many seem to think can avoid recurrence of last fall's frost damage by earlier planting and varieties.

Kenneth M. Reed, County Agent, Beatrice, for Gage County and southeast: Planting 1 week late, 10 percent completed. Our production in such small quantities have traded beans at mill for meal. Dunfield coming in strong.

Peter Marr, Fremont, for northeast, southeast and central: Planting conditions good. Will slightly surpass 1943 goals, with less than 1 percent for hay. Trend toward earlier varieties. Believe subsidy responsible for large percent of increase.

North Dakota

William J. Leary, extension agronomist, Fargo: Moisture excessive, particularly in southeast corner, which will delay seeding. Probably some acreage increase over 1942. Some shift toward earlier maturing varieties but due to shortage of seed not much choice. Government program tends to stimulate production in this area.

Kansas

Weekly Crop Report: Some early fields seeded in eastern counties.

E. A. Cleavinger, extension specialist, Manhattan: Planting conditions poor in southeast, fair in east central and north, with 25 percent completed. Beans will replace some flooded out corn. Acreage estimated 300,000 compared to 275,000 goal. Varieties largely Hongkong, Dunfield, and Illini, also a few Chief. 5 percent for hay.

★ GRITS AND FLAKES ★

FROM THE INDUSTRY

A group composed of the leading brokers in the country have formed the National Fats and Oils Brokers Association, with the object of aiding industry and the Government in the distribution of allocated and unallocated, edible and inedible fats, oils, oil cake and meal throughout the country.

The Association further hopes to maintain the present high code of ethics of brokerage practices and to promote cooperation and good will between all those associated with their industries.

Officers of the Association are: Marvin Wood, Chicago, president; William B. Burr, Chicago, vice president; C. G. Carter, Memphis, Tenn., secretary-treasurer.

The directors: D. A. Lacy, Dallas, Tex.; Carr Robinson, Dallas, Tex.; W. L. Cain, Atlanta, Ga.; Lysle Alderson, New York; Brayton Wilbur, San Francisco, Cal.; A. J. Sumner, Memphis, Tenn.; J. G. Lusk, Greenville, Miss.; Carl Smith, Chicago; M. A. Raclin, Chicago.

Prof. Wesley P. Flint, 60, chief entomologist of the Illinois State Natural History Survey and of the University of Illinois College of Agriculture, died in his office June 3 following his collapse from a heart attack. Internationally known in the fields of science and entomology, Prof. Flint was identified with some of the most outstanding developments in these fields. He originated the creosote-cyanide barrier method of chinch-bug control and within the past few years had perfected an even more advanced system of chinch bug control through the use of dinitro dust. He had been associated with Dr. Benjamin Koehler of the department of agronomy in soybean disease work.

Whitney Eastman has joined General Mills as an executive in the field of special investigation and research. Until recently he was vice-president and director of the Archer-Daniels-Midland Co., with which he had been associated since 1928. He resided in Milwaukee from 1919 to 1938, as an executive of the W. O. Goodrich Co., which became a part of the Archer-Daniels-Midland Co. in 1928.

Above is a reproduction of the lithographed poster which has been prepared by the Feed Industry Council to further its voluntary protein conservation program, which has the support of the U. S. Department of Agriculture. Posters are being mailed to grain and feed dealers to display in their windows to let their customers and the whole world know that they are cooperating in this program.

IN THE MARKETS

● **SOYBEAN STORAGE CAPACITY AND STOCKS,** April 1, 1943:

State	Feb. 16, 1942	April 1, 1943	State	Feb. 16, 1942	April 1, 1943
	Thousand bushels			Thousand bushels	
Maine	—	—	North Carolina	174	523
New Hampshire	—	—	South Carolina	1	246
Vermont	4	1	Georgia	4	929
Massachusetts	76	—	Florida	1	—
Rhode Island	—	—	Kentucky	1,233	1,413
Connecticut	—	—	Tennessee	41	1,045
New York	698	1,432	Alabama	1	463
New Jersey	14	336	Mississippi	91	1,104
Pennsylvania	42	283	Arkansas	20	234
Ohio	3,089	5,472	Louisiana	22	449
Indiana	2,347	3,606	Oklahoma	5	255
Illinois	19,572	22,100	Texas	4	1,468
Michigan	72	—	Montana	—	—
Wisconsin	58	155	Idaho	—	—
Minnesota	257	696	Wyoming	—	—
Iowa	3,060	4,736	Colorado	—	—
Missouri	546	1,933	New Mexico	—	—
North Dakota	—	—	Arizona	—	—
South Dakota	—	6	Utah	—	—
Nebraska	194	—	Nevada	—	—
Kansas	50	218	Washington	8	—
Delaware	24	27	Oregon	—	—
Maryland	16	117	California	191	444
Virginia	146	521	Other States	—	717
West Virginia	2	3	United States	32,063	50,932

Not including soybeans in steel and wooden bins and owned by C.C.C., 13,000,000 bushels April 1, 1943, nor on farms. Massachusetts, Michigan, Nebraska, Florida combined to avoid disclosing individual operations.

Commercial grain stocks reports list stocks of soybeans in commercial storage May 18, 2,824,700 bu.; May 25, 2,984,317 bu.; and June 2, 2,898,763 bu.; June 9, 3,114,504 bu.

● **SOYBEAN INSPECTIONS.** Inspected receipts of soybeans in April were about 20 percent below the March inspections but the quality was materially better, inspectors' reports to the Food Distribution Administration show. April inspections totaled 6,143 cars, of which 5,982 cars classed as Yellow. The April inspections brought the season's total to 56,934 cars compared with 37,769 cars October through April last season.

Period 1942-43	Total Car Lots				
	Illinois	Indiana	Iowa	Missouri	Ohio
Oct. 1-15	3,752	702	370	75	536
Oct. 16-31	6,118	718	1,117	117	1,893
Nov. 1-15	1,554	229	596	112	716
Nov. 16-30	1,866	245	289	158	406
Dec. 1-15	1,060	331	188	319	386
Dec. 16-31	813	431	267	674	604
Jan. 1-15	684	362	202	274	381
Jan. 16-31	484	294	177	438	320
Feb. 1-15	1,132	168	219	593	218
Feb. 16-28	994	141	227	367	201
Mar. 1-15	2,138	182	486	429	245
Mar. 16-31	1,505	149	421	525	190
Apr. 1-15	1,685	189	296	446	126
Apr. 16-30	1,541	214	220	40	260
May 1-15	1,704	180	281	44	221
May 16-31	1,363	187	275	67	252
	28,393	4,722	5,631	4,678	6,955

● **STANDARD SHORTENING SHIPMENTS.** By Members of Institute of Shortening Mfgrs., Inc.

Week ending May 8, lbs.	7,862,036
Week ending May 15	9,523,334
Week ending May 22	8,842,526
Week ending May 29	8,728,666
Week ending June 5	8,404,891

● **ILLINOIS PRODUCTION.** Latest pamphlet, "Illinois Crop and Livestock Statistics by Counties" has been issued by the Illinois crop reporting service. This covers soybeans harvested for beans in Illinois for the years 1941 and 1942 by counties, and includes acres, yield per acre and production by bushels for each county in the state.

● **SOYBEAN OIL IN MARGARINE.** Because of the wartime demand for cottonseed oil, the War Food Administration has requested the margarine industry to use corn oil as well as soybean oil in the manufacture of its product.

While all edible oils are in small supply, cottonseed oil is needed in large quantities — and for many purposes. Corn oil, on the other hand, has been used primarily for the making of salad oils and mayonnaise. Its greater use in margarine, therefore, would relieve the burden on cottonseed oil. Soybean oil already is being used to a great extent in margarine.

The problem was pointed out at a recent meeting of the Food Distribution Administration's margarine industry advisory committee, at which the industry was advised to look ahead for changes in packaging labels which might be made necessary by the use of different oils.

Citing the fact that 90 percent of the margarine production already is being fortified with vitamin "A," the committee stated that it was unnecessary to make such fortification mandatory.

Since the margarine industry is subject to provisions of Food Distribution Order No. 29, which regulates the use and distribution of cottonseed, peanut, soybean and corn oils, the committee was asked to make suggestions — consistent with the order's objectives — which might contribute to the efficient operation of the allocation's program.

● **1942 CROP DISPOSAL.** Total value of sales of 1942 crop soybeans is estimated by the Bureau of Agricultural Economics at $309,689,000. This compared with $139,606,000 for 1941. The average season price received by farmers for 1942 crop soybeans is $1.606 compared with $1.543. This figure includes an allowance for unredeemed loans at average loan value.

The BAE estimates that of the 209,559,000 bushel crop for 1942, a total of 23.3 million was used for seed, 12.2 million on the farms where it was grown. 4.4 million bushels were fed to livestock and 192.8 millions sold outright. Of the 105.6 million bushel crop of beans produced in 1941, 21 millions were used for seed, 11 million of them on the farms where produced. Four million bushels were fed to livestock and 90 millions were sold outright.

GOVERNMENT ORDERS

● **EDIBLE OIL ORDER.** The War Food Administration has announced that edible oils allocated to manufacturers and not used by them for the purpose specified in the allocation will revert to inventory and remain there until further authority is granted.

The provision is contained in an amendment to Food Distribution Order 29, effective May 3. The order regulates the use and distribution of peanut, soybean, cottonseed and corn oils.

Under the original order, manufacturers are required to state in their applications the amount of oils they desire for specific allowable purposes. The amendment makes them accountable for its use, and this use must be consistent with the allocation.

● **OIL ORDER.** Price control has been extended by OPA to intermediate grades of refined cottonseed, peanut and soybean oil.

Adjustments in the soybean oil pricing schedule result in maximum prices of $12.57 a hundredweight for bleached and undeodorized soybean oil, f. o. b. Decatur, Ill., and of $12.60 a hundredweight for deodorized and unbleached soybean oil, f. o. b. Decatur, Ill.

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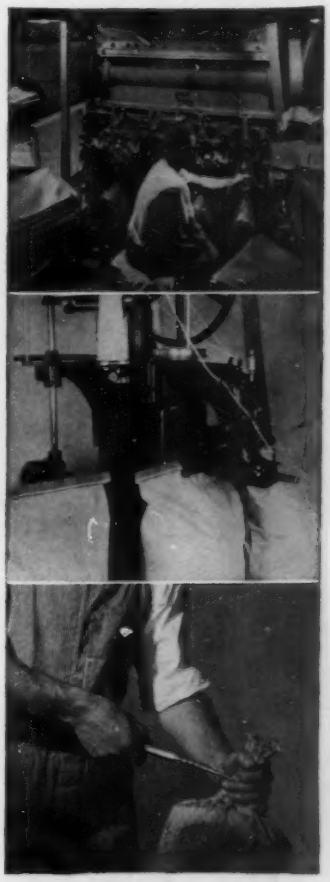
St. Regis Multiwall Paper Bags are specially designed to protect the product in storage and transit. Special sheets of paper are incorporated in the bag construction to meet special problems such as rough handling, extreme weather conditions, moisture penetration and chemical action.

If you ship in units of 25 to 100 lbs. our packaging engineers will welcome the opportunity to study your packing operation, develop the proper Multiwall Paper Bag for your product and install the most efficient and economical packaging equipment to meet your production requirements. St. Regis Paper Company offers all types and construction of Multiwall Paper Bags and a complete packaging service.



1. *Valve Pack* – automatic valve bag packing machines which weigh a product and force it into the self-closing valve type Multiwall Paper Bag. This operation offers maximum production with a minimum amount of labor.

2. *Sew Pack* – automatic sewing machines for applying an efficient and economical closure to open-mouth bags. This equipment, applying a bound-over tape and a filter cord, sews through all plies of the bag.

3. *Tie Pack* – Where the number of units packed does not warrant the installation of automatic equipment, the wire tie offers an economical and efficient method of closing open-mouth bags. A hand-twisting tool constitutes the entire equipment for effecting the securely tied closure around the neck of the bag.

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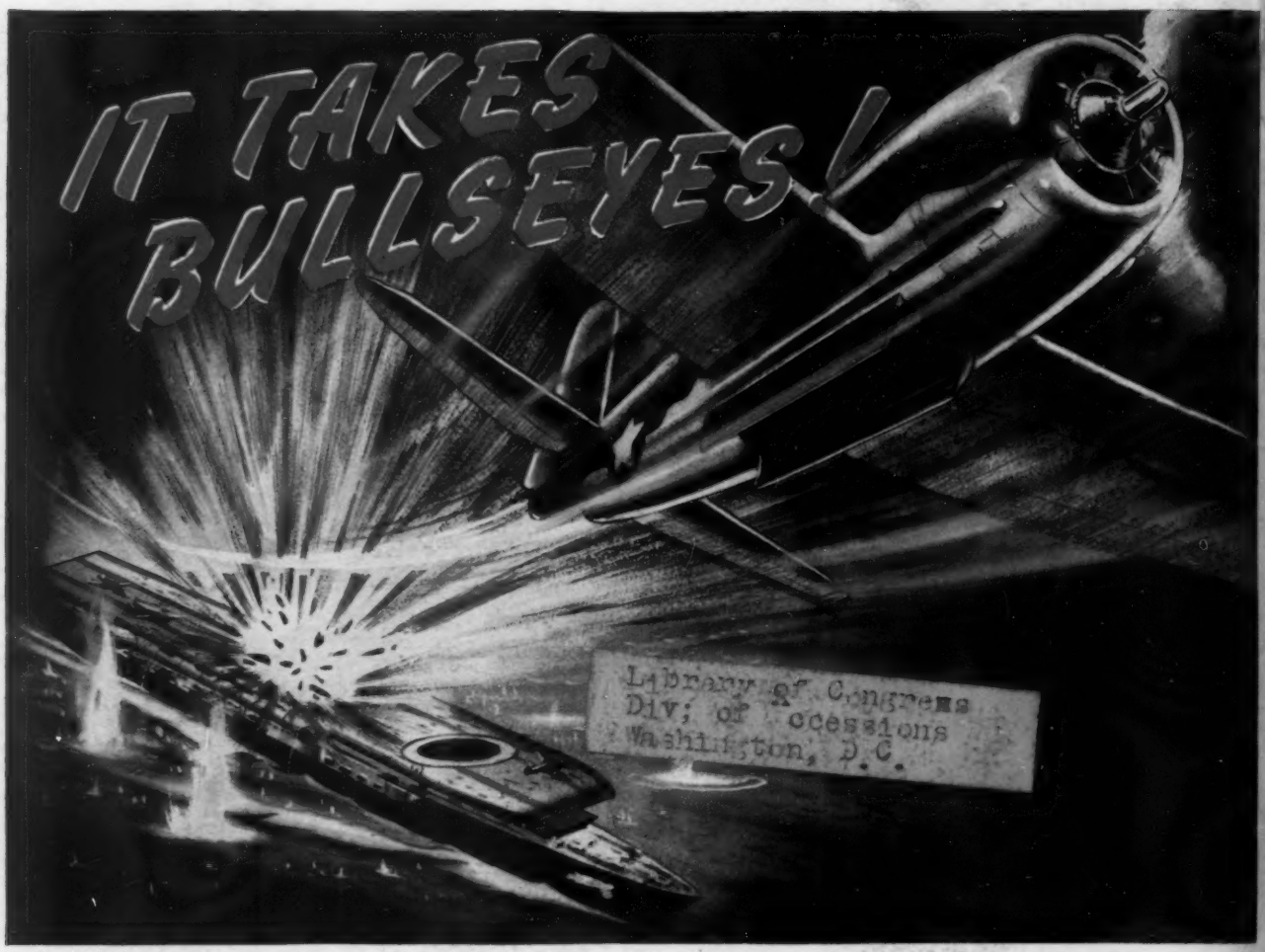

WHEN there's a fight going on, it takes good guns and *good gunners* to win. Near hits score no knockouts!

When you've *got to have* solvents—*almost* getting them to you when you want them adds up to no help.

That's why it will pay you to make firsthand acquaintance with SKELLYSOLVE and Solvents Division of Skelly Oil Company. We have the sources of supply . . . the refining facilities . . . the distribution organization. The Skellysolve reputation for delivering the goods has been built on performance in the pinches. Phone, write, or wire us and you'll *get* the solvents you need when you need them.

SKELLYSOLVE
for the Extraction Method in the
SOYBEAN INDUSTRY

The Skellysolve especially refined for the extraction of soybean oil not only gets *more oil* from each bushel of soybeans but, also, the extraction process is more favorable to the retention of nutritional properties of soybean meal. Skellysolve has the correct boiling range, is free from greasy residues, foreign tastes and odors, all of which is essential to the success of the more efficient extraction method.

SKELLY

SKELLYSOLVE

SOLVENTS DIVISION, SKELLY OIL CO.
SKELLY BLDG., KANSAS CITY, MO.